(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number
WO 2005/094071 A1

(51) International Patent Classification[7]: H04N 5/74

(21) International Application Number:
PCT/US2005/009621

(22) International Filing Date: 22 March 2005 (22.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/555,253 22 March 2004 (22.03.2004) US

(71) Applicant *(for all designated States except US)*: **THOMSON LICENSING S.A.** [FR/FR]; 46 Quai A. Le Gallo, F-92100 Boulogne-Billancourt (FR).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **RUMREICH, Mark Francis** [US/US]; 10308 Indian Lake Boulevard South, Indianapolis, IN 46236 (US).

(74) Agents: **TRIPOLI, Joseph, S.** et al.; c/o THOMSON Licensing Inc., Two Independence Way, Suite 200, Princeton, NJ 08540 (US).

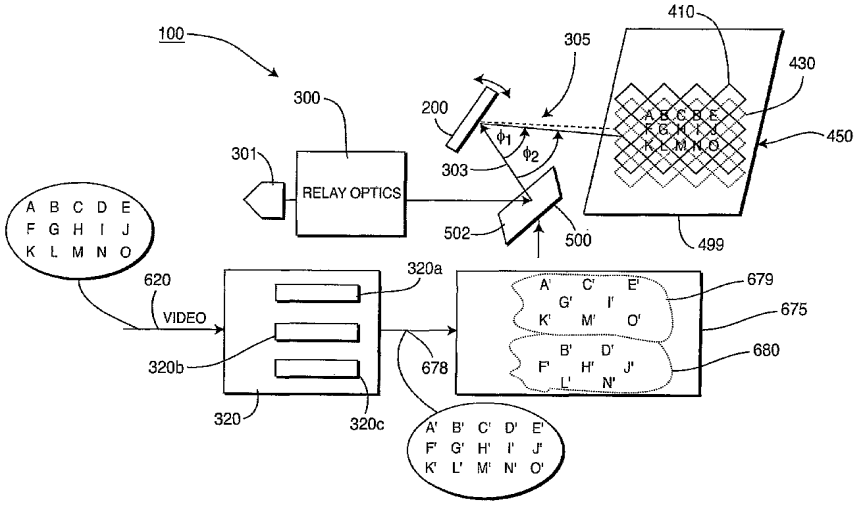
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** METHOD AND APPARATUS FOR IMPROVING IMAGES PROVIDED BY SPATIAL LIGHT MODULATED (SLM) DISPLAY SYSTEMS



(57) **Abstract:** The invention provides a method and system for reducing distortion in images provided by display systems(100) employing Spatial Light Modulating (SLM) elements is provided. A method. comprises steps of providing a set (620) of pixel values corresponding to pixels of an image to be displayed. The number of pixel values comprising the set is greater than the number of available SLM elements. At least some of the pixel values are adjusted to provide a set of adjusted pixel values (678). At least a first set of pixels and a second set of pixels are generated from the set of adjusted pixel values. The image is displaying as a matrix of pixels (450) comprising the first set of pixels (410) and the second set of pixels (430). At least one of the pixels of the first set overlaps at least one of the pixels of the second set and the adjusting step is carried out by adjusting pixel values of the pixel data set to compensate for image distortion due to overlapping pixels of the matrix.

WO 2005/094071 A1